APPENDIX

The amended claims shown above have been amended as follows:

1. (Twice Amended) A process for treating a metal substrate to improve adhesion of polymeric materials thereto, comprising the steps of

intergranular etching a surface of the metal substrate; and

applying an immersion plated metal to the intergranular etched surface by immersing the surface in an immersion plating composition comprising one or more plating metals selected from tin, silver, bismuth, copper, nickel, lead, zinc, indium, palladium, platinum, gold, cadmium, ruthenium, cobalt, gallium and germanium,

wherein the step of intergranular etching is carried out with an intergranular etching composition [~~selected from the group consisting of:~~

~~(1) an intergranular etching composition comprising~~

~~an oxidizer;~~

~~a mineral acid, an alkyl sulfonic acid or fluoroboric acid, or a mixture thereof;~~

~~a corrosion inhibitor; and~~

~~a source of halide ions; or~~

~~(2) an intergranular etching composition comprising~~

~~0.1 to 20% by weight hydrogen peroxide,~~

~~an inorganic acid,~~

~~an organic corrosion inhibitor and~~

~~a surfactant; or~~

~~(3) an intergranular etching composition~~] comprising

(a) hydrogen peroxide;

(b) at least one acid, wherein the at least one acid comprises sulfuric acid or a sulfonic acid;

(c) at least one nitrogen-containing, five-membered heterocyclic compound which does not contain any sulphur, selenium or tellurium atom in the heterocycle; and

(d) at least one adhesive compound selected from sulfinic acids, seleninic acids, tellurinic acids, heterocyclic compounds containing at least one sulfur, selenium and/or tellurium atom in the heterocycle, and sulfonium, selenonium and telluronium salts having the general formula (A),

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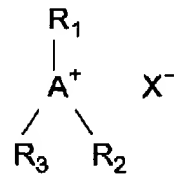


in which
A stands for S, Se or Te;
R_1, R_2 and R_3 stand for alkyl, substituted alkyl, alkenyl, phenyl, substituted phenyl, benzyl, cycloalkyl, substituted cycloalkyl, R_1, R_2 and R_3 being the same or different; and
X^- stands for an anion of an inorganic or organic acid or hydroxide, provided that the acid selected to constitute component (b) is not identical to the sulfinic, seleninic or tellurinic acids selected as component (d) [~~; or~~

~~(4) an intergranular etching composition comprising~~

~~0.5 to 5% w/v hydrogen peroxide; and~~

~~0.01 to 5% w/v of an aromatic sulfonic acid or a salt thereof,~~ ~~or~~

~~(5) an intergranular etching composition comprising:~~

~~(a) an acid;~~

~~(b) a copper complexing agent selected from the group consisting of urea compounds, thiourea compounds, amidines, imidazole thiones, 2,4-dithiobiruet, 2,4,6-trithiotriuret, alkoxy ethers of isothiourea, thiocyanuric acid, and thioammelide;~~

~~(c) a metal selected from the group consisting of tin, bismuth, lead and cerium, which is present in one of its higher positive oxidation states and which metal forms a composition soluble salt, and~~

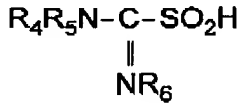
~~(d) oxygen,~~

~~wherein the concentration of the higher positive oxidation state metal in the composition is greater than about 4 grams per liter of the composition~~].

3. (Twice Amended) The process of claim 1, wherein the intergranular etched surface comprises intergranular crevices having an aspect ratio of about [1] 2 or greater.

43. (Amended) The process of [claim 42] claim 1, wherein component (c) comprises one or more triazoles, tetrazoles, imidazoles, pyrazoles and purines.

44. (Amended) The process of [claim 42] claim 1, wherein component (d) is a sulfinic acid selected from aromatic sulfinic acids and compounds having the formula:



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wherein R_4, R_5 and R_6 = H, alkyl, substituted alkyl, phenyl, substituted phenyl, R_7-(CO)- with R_7 = H, alkyl, substituted alkyl, phenyl, substituted phenyl, wherein R_4, R_5 and R_6 may be the same or different.

45. (Amended) The process of [claim 42] claim 1, wherein component (d) is formamidine sulfinic acid.

46. (Amended) The process of [claim 42] claim 1, wherein component (d) comprises one or more heterocyclic compounds selected from thiophenes, thiazoles, isothiazoles, thiadiazoles, and thiatriazoles.

47. (Amended) The process of [claim 42] claim 1, wherein component (d) comprises one or more sulfinic acid compounds selected from benzene sulfinic acid, toluene sulfinic acid, chlorobenzene sulfinic acid, nitrobenzene sulfinic acid and carboxybenzene sulfinic acid.

48. (Amended) The process of [claim 42] claim 1, wherein component (d) comprises one or more sulfonium salts selected from trimethyl sulfonium salts, triphenyl sulfonium salts, methioninealkyl sulfonium salts, and methionine benzylsulfonium salts.

50. (Amended) The process of [claim 49] claim 101, wherein the sulfonic acid or salt thereof includes one or more aromatic groups which are carbocyclic rings.

51. (Amended) The process of [claim 49] claim 101, wherein the composition further comprises 0.1 to 2% w/v of a corrosion inhibitor selected from triazoles, tetrazoles, imidazoles, and mixtures thereof.

52. (Amended) The process of [claim 49] claim 101, wherein the sulfonic acid or salt thereof is sodium m-nitrobenzene sulfonate.

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